The World's Best Anglo-American Universities' Knowledge Management Attributes

Greg Tower, Curtin University of Technology, Perth, Australia
Julie Plummer, University of Western Australia, Perth, Australia
Brenda Ridgewell, Curtin University of Technology, Perth, Australia
Emily Goforth, Curtin University of Technology, Perth, Australia
Spence Tower, Ferris State University, USA

ABSTRACT

Key knowledge management attributes of the world's most prestigious Anglo-American universities are surprisingly under-reported especially by best ranked USA institutions. This leads to calls for more transparency.

Keywords: Communication, knowledge management, Anglo-American universities

STUDY PARAMETERS AND KEY LITERATURE

This study examines the key knowledge management attributes of the most prestigious Anglo-American universities in the world. These highly visible institutions for higher learning play the pivotal role for the evolvement and acquisition of knowledge management for their societies. Arguably, the past success of the Anglo-American countries on the world stage can be directly attributable to their creation and manipulation of knowledge for science, engineering and commerce pursuits.

This research project closely examines the key knowledge management (KM) attributes for these globally-renowned universities. The structure of this paper is as follows. First, past studies are reviewed, leading to the evolution of a positivist empirical research design approach. The top 50 globally-ranked Anglo-American universities are analyzed for their external communication of their key KM activities. Descriptive and statistical analyses of these patterns are then provided. Finally, reflections on the current status of the key KM attributes are offered.

Knowledge Management (KM) Literature

The knowledge management literature encompasses many elements of business disciplines. Research can be found in economics, accounting and especially the management literature. Knowledge management is best defined as "the broad process of locating, organizing, and transferring, and using the information and expertise within an organization" (Koenig, 1998, p.225). Some articles differentiate this concept from the intellectual capital definition; however, the core issues are very similar thus this paper considers both terms to be synonymous (see also Petty & Guthrie, 2000).

Meer-Kooistra and Zijlstra (2001) reviews the internal and external building blocks of an intellectual capital/knowledge management (IC/KM) reporting framework. Their paper outlines the various reporting models used in practice and specifically links them with the management of Dutch companies. Their key finding is both the providers and users of IC/KM are not putting sufficient effort on the external reporting of these attributes.

Abeysekera (2006) addresses the strengths, weaknesses and gaps within the extant research and suggest ways to improve the credibility of the research process and its impact on the stakeholders. With regards to definition

of IC and KM, there is still debate on three questions: to what level is there a need to report; what to report and how to report. For methodological issues careful consideration need to be given to coding the communication most often found in the annual report. In terms of theoretical perspectives, Abeysekera (2006) also suggests the need to employ more than one research method to add credibility and reliability in the research findings. He argues that most studies on KM/IC disclosure provide little or no theoretical basis to explain the findings. He reviews the theories used by prior literature such as resource-based theory, signaling theory, stakeholder theory, legitimacy theory and political economy accounting theory. In terms inter-country comparative studies, he asserts that the differences in the disclosure are related to social, political and economic factors. These factors may also influence the KM attributes of Anglo-American universities in this study.

Bukh (2003) made a special commentary on the supposed irrelevancy of intellectual capital and knowledge management as somewhat "illogical" since 'intellectual capital' reports and recent prospectuses show the similarity with the disclosure of intellectual capital indicators. He argues that these disclosures should communicate the management's understanding of strategy and value creation instead of only showing indicators for general interest. Bukh (2003) strongly advocates that disclosure of intellectual capital and knowledge management should be included in the framework of the firm's strategy for value creation.

Another argument about intellectual capital statement is advanced by Mouritsen, Larsen, Thorsgaard, Johansen, Bukh and Nikolaj (2001). These authors illustrate how the intellectual capital statements may be critiqued by development of an IC accounting system. Their analysis shows that there is interrelationship between the "external" intellectual capital statement and the "internal" knowledge management activities. Mouritsen *et. al.* (2001) conclude that the intellectual capital and knowledge management statements are a combination of strategy, management and reporting.

There are several empirical studies using developed country data that have used various external documents such as annual reports and initial public offerings to empirically analysis various aspects of knowledge management and intellectual capital. Bukh, Nikolaj, Neilsen, Gormsen and Mouritsen (2005) focused on the voluntary disclosure of intellectual capital in Danish IPOs. Their data showed significant increases from 1990 to 2001. Statistical predictors were industry and level of managerial ownership. Guthrie and Petty (2000) argue the lack of intellectual capital reporting by large Australian companies are due to absence of an established and generally accepted framework for reporting and lack of awareness. They also noted that most intellectual capital report in "discursive" rather than in 'numeric' terms. Brennan (2001) sample comprised 11 knowledge-based listed companies in Ireland. Significant differences in market values and book values were found in nine companies, suggesting that knowledge-based Irish listed companies have a considerable amount of non-physical, intangible intellectual capital assets. Yet, the disclosure level of knowledge management attributes was low overall. Williams (2001) examined intellectual capital disclosure practices of 31 random selected UK listed companies in their annual reports from 1996 – 2000. His statistical analysis highlights that a firm's listing status, extent of leverage and industry influenced the amount of intellectual capital disclosed provided by a firm. Bozzolan *et. al.* (2003) looked at 30 non-financial companies' listed in the Italian Stock exchange as at 31 December 2001. They noted a positive association between the size and industry of a firm and the amount of intellectual capital disclosure. Most reported information was linked to external structures with particular attention to customers, distribution channels, business collaboration and brands. Guthrie *et. al*. (2006) compared the IC voluntary reporting by listed companies in Australia and Hong Kong. Their key findings were that there is still a major gap between 'rhetoric' and the 'reality' with regard to the measuring, valuing and reporting of IC; most of the information remains in discursive form; and reporting of IC is inconsistent and varied in nature between different companies. Sujan and Abeysekera (2007) employ content analysis to examine IC reporting in the annual reports of the top 20 firms (by market capitalization) in 2004. They noted an increase of IC quantitative disclosure among the Australian firms. They argue that knowledge-based and service firms have the incentive to set the agenda for more IC reporting through annual report and portraying their competitiveness in the industry.

Research on intellectual capital and knowledge management has also been conducted in developing counties. For example, Bontis *et. al*. (2000) examine three elements of intellectual capital i.e. human capital, structural capital and customer capital and their interrelationships with two industry sectors (service industries and non-service industries) in Malaysia. They find that human capital is positively associated with customer capital and structural capital; that customer capital is positively associated with structural capital and that structural capital is

positively associated with business performance. Goh and Lim (2004) also conducted research on IC disclosure in Malaysian public listed companies. They note that the incidence of disclosing IC information is qualitatively and not quantitatively in nature. The most reported category is external capital category with limited disclosure on patent, copyright, trademark, franchising agreement, know- how and vocational qualification. The authors argue that an accounting framework on intellectual capital should be developed by national setting body as there is no availability of accounting standard on intellectual capital. April *et. al.* (2003) conducted similar research in South African mining industry. In terms of attributes of the intellectual capital, the top five occurrences were: business collaborations, work-related experience, management process, customers and brands. External capital information was slightly more reported than internal and human capital. The authors conclude that that the companies need to implement appropriate systems and structures to better manage intellectual capital. Abeysekera and Guthrie (2004) examine disclosure patterns of human capital reporting in Sri Lanka and also to determine difference in disclosure pattern between Sri Lanka and developed nations. They concluded that the differences in human capital reporting across countries are contributed by factors such as political, social and economic institutional framework. Abeysekera and Guthrie (2005) evaluated the annual reports of the top 30 firms on the Colombo Stock Exchange in the period 1998/1999 to 1999/2000. They argued the steps implemented towards a knowledge-based economy stimulate the firms to disclose more information. As an extension, Abeysekera (2008) investigated the motivation behind human capital disclosure in annual reports in of selected companies in Sri Lanka in 2000 and 2001. Employee relations and employer measurement were the most frequently disclosed, whilst equity issues and workplace safety was the least disclosed. His study argued that the firms had different motivation when they voluntarily disclose human capital in annual reports.

Some comparative international studies also have been conducted in relation with KM/IC disclosure. Vandemaele *et. al*. (2005) investigated such disclosures in the Netherlands, Sweden and UK. The results indicate that Sweden has higher IC disclosure as compared with Netherlands and UK. They noted an increasing trend in the average amount of IC disclosure during the three years under study. Vergauwen and Alem (2005) examine IC disclosures by French, Dutch and German public listed companies in the years 2000 and 2001. They found significantly higher average disclosure numbers in French annual reports as compared to other two countries.

Garcia-Meca *et. al. (*2005) assessed the intellectual capital information of sell-side analysts' presentations and the influence on these disclosures. Their study showed that companies mostly reported on strategy, customers and processes. Information about research, development and innovation was less often reported to financial analysts. By category, customer, strategy and technology information were reported in quantitative terms meanwhile only human capital information was revealed in qualitative term. Another study on intellectual capital disclosure with evidence from financial analysts was conducted by Garcia-Meca in 2005. Their results show that the firms use analyst meetings as a source of voluntarily disclosing data on intangibles and that financial analyst value such information to provide earning forecasts and buy/sell/hold recommendation. Their findings show that some of the items most frequently disclosed in the meetings and considered in valuation tasks are related to coherence and credibility of strategy, alliances or leadership.

Knowledge Management And Intellectual Capital Studies In The Public Sector

Tower, Plummer, Ridgewell, Goforth and Tower (2008) note the paucity of research conducted on knowledge management and intellectual capital, especially in the public sector arena. Lee *et. al.* (2007) examine the disclosure of intellectual capital contained within Australian private and public hospitals website. Their findings indicate that the extent of IC disclosure in the hospital websites is relatively low. Via statistical analysis they conclude the disclosure amount significantly varied according to the state location, designation as a private or public hospital, whether the hospital is general or specialized in its operation, and location of the hospitals.

Cameron and Guthrie (1993) in a case study on the University of New South Wales use content analysis method to conduct a historical study of the dynamics of reporting practice from 1950 to 1988. The primary source of data is university's annual report and other external reporting documents of the universities. Their analysis on the annual reporting practices at UNSW indicates the change in contents and size of the annual report over the period under study. The investigation on the "review of operation' section reveals that: "from 1985, one year before required by regulation, all nine items have been reported" (p.6). These items include Significant Operations, Capital

Works, Research Activities and Staffing Details. They note no conclusive evidence of external influence on the universities annual reports but instead find the influence is internally driven.

Ramirez, Lorduy and Rojas (2007), Sanchez and Elena (2006), and Leitner and Warden (2004) evaluate the experiences of European universities. They highlight the unique and changing role of higher education institutions. The challenges highlighted by the authors are: "… extended competition with other organizations; the increasing level of internationalization of education and research; pressure to harmonize the different national university system; implementation of new research modes; the claims and aspirations of various stakeholders and increased demand for transparency and accountability regarding the results and benefits derived from the public funds" (p733). Sanchez and Elena (2006, p.536) assert the importance of "managing and reporting on intangibles in making universities and research institutes more comparable, flexible, transparent and competitive". Tower et al (2008) argue these studies point out the importance of research into intellectual capital and knowledge management capabilities for higher education institutions.

Liu (2007) looks at the management perspective in her study on developing measures of value creation at private universities. The data was gathered from the twelve senior business academics of five Taiwanese universities. The author argued that value creation can be divided into six dimension namely human capital, relational capital, innovation capital, alumni capital, financial capital and structural capital.

In a related study, Tower et al (2008) analysed KM/IC communication patterns for the entire population of Australian universities. They found that the level of intellectual capital/knowledge management capabilities of Australian universities ranged from a low of 21% for the 'customer' element to a high of 53% for 'process' elements. The authors express surprise at the overall low level of activity communicated. Interestingly, their statistical analysis found that lower profit tertiary institutions disclosed more KM-style items. They conclude that a "greater focus and clearer communication to customers, employees, government bodies and industry would assist the Australian society in achieving better future contributions in humanities, science and technology" (p.8).

Overall, these studies highlight the need for more research into transparency of knowledge management and intellectual capital attributes especially for the education industry wherein arguably 'knowledge' is the key commodity offered.

DATA AND RESEARCH FINDINGS

Larsen *et. al*. (1999) review studies analysing the 'measuring', "reporting' and 'acting' intellectual capital statements. According to the authors, "recording is less about finding a "true and fair" bottom line, but more a collage of digits, stories and sketches which together create a broad and sometimes aesthetic presentation of a firm" (p. 16) . Their study concludes that the intellectual capital statements are mobilized by firms to implement strategies rather than to explain past results. They further assert there are three types of expressions in relation with three types of fundamental questions namely: 'What is?', 'What is done?' and 'What happen'?

Beattie and Thomson (2007) highlight difficulties in measuring IC/KM activities. They identify six specific problems in using the content analysis approach to investigate the IC disclosures in the annual reports. The issues include: concept boundary problems and coding reliability; manual versus electronic searching; the annual report material analyzed; the volume of disclosure (presence / absence versus count of occurrence - with or without repetition); location; and type of IC disclosure unit of measurement. They also note a lack of explanation of the nature of IC/KM information. Given these concerns, this study uses the more frequently used disclosure index as the specific research method for measuring KM activity (see Marston and Shrives, 1991 for a review of disclosure index studies).

Table 1: Key Demographic Characteristics: Top 50 Ranked Anglo-American Universities

University name	*Rank*	*Total Assets (American $)*	*ROA*	*Leverage*	*Knowledge Management Dependent Variable (KMDV)*
Harvard University	1	44269293795	0.0%	21.21%	32.05%
Yale University	4	27666115481	0.0%	29.64%	32.05%
Princeton University	6	16130853557	0.0%	11.47%	12.82%
California Institute of Technology	7	3700193075	1.3%	33.59%	6.41%
University of Chicago	8	8831962391	0.1%	32.56%	25.64%
Massachusetts Institute of Technology	9	12342141148	-0.3%	18.63%	11.54%
Duke University	10	10279128978	0.5%	23.32%	23.08%
University of Pennsylvania	11	10352290585	2.3%	29.37%	20.51%
Stanford University	13	21772581701	0.6%	15.62%	24.36%
Carnegie Mellon University	14	1943807330	0.5%	27.01%	20.51%
Cornell University	15	8370231202	8.7%	21.45%	43.59%
Northwestern University	19	7658039163	1.1%	22.19%	11.54%
University of Michigan	26	11970677417	0.0%	17.57%	32.05%
University of California, Los Angeles	27	5556464451	3.3%	22.90%	16.67%
University of Washington	32	6187489056	-7.7%	29.35%	23.08%
University of California, San Diego	33	2978350916	-8.7%	47.56%	32.05%
University of Illinois	40	4529633174	-23.3%	47.76%	32.05%
University of Pittsburg	42	3853411942	2.3%	31.53%	20.51%
University of Maryland	43	4448919992	-18.1%	30.93%	11.54%
Case Western Reserve University	46	2926611058	-1.4%	30.08%	15.38%
University of Rochester	48	3483454733	3.2%	30.83%	21.79%
Georgia Institute of Technology	50	1352472413	1.3%	31.87%	26.92%
University of Cambridge	2	3976856079	0.4%	19.85%	19.23%
University of Oxford	3	3192736973	0.2%	18.15%	19.23%
Imperial College London	5	1721639355	1.3%	37.54%	25.64%
University of Edinburgh	16	2137291092	0.8%	88.77%	29.49%
King's College London	17	1527765905	1.5%	29.52%	30.77%
University of Manchester	20	1807494516	-2.2%	42.31%	26.92%
University of Bristol	25	1278600298	0.8%	23.91%	26.92%
London School of Economics	34	534596724.9	5.8%	28.08%	29.49%
University of Sheffield	37	1128957047	-10.2%	36.75%	35.90%
University of Nottingham	39	830774193.4	-2.0%	46.44%	21.79%
University of St Andrews	41	370786402	10.9%	50.78%	12.82%
University of Leeds	44	886415285.4	1.8%	34.54%	42.31%
University of Glasgow	45	1196891166	0.3%	19.61%	20.51%
Australian National University	12	2004096490	4.0%	28.63%	15.38%
University of Melbourne	18	3276457850	2.2%	13.48%	21.79%
University of Sydney	21	2985312830	5.0%	17.32%	46.15%
University of Queensland	23	1621004160	2.1%	14.14%	43.59%
Monash University	28	1723895340	2.6%	30.08%	38.46%
University of New South Wales	29	1546872140	1.1%	36.39%	38.46%
University of Adelaide	35	738780350	4.2%	15.89%	33.33%
University of Western Australia	36	903072700	2.8%	14.59%	38.46%
University of British Columbia	22	2637805870	0.0%	60.08%	25.64%
University of Toronto	30	3142276193	2.1%	48.62%	17.95%
Queen's University	47	1061091658	3.3%	46.77%	43.59%
University of Alberta	49	2175987976	2.3%	58.54%	30.77%
National University of Singapore	24	3048369282	5.4%	39.53%	24.36%
Nanyang Technological University	38	1781848809	5.0%	48.25%	26.92%
University of Auckland	31	886852478.5	1.6%	17.39%	43.59%
US University' Means		10027460161	*-1.56%*	*27.56%*	*22.55%*
All Other Country University Means		1790161756	*1.90%*	*34.50%*	*29.62%*
Statistical Differences (t-tests; p-values)		*.001*	*0.046*	*0.77*	*0.01*

Legend: *Highly Significant at p-value <.01; **Significant at p-value <.05; ***Moderately Significant at p-value < .10.

This study adopts a KM/IC index from Tower et al (2008) and Bukh et al (2005). KM/IC is measured using a comprehensive 78 point disclosure index with each of the items scored dichotomously (present/not present). The data set is the top 50 ranked English-language universities in the world as rated by *The Times Higher Education Supplement* (2007). This body globally ranked the world's best universities on a series of broad criteria including peer review, employer viewpoints, teaching, research and level of internationalization. *The Times* clearly recognized the importance and role of these top universities in generating and distributing knowledge in stating "… in many cases they are far from being ivory towers. Instead they are active in generating new technology and ideas across a wide range of study areas and are closely integrated into the economies and societies in which they form part" (p.2). This data set of the top English speaking universities ranks 22 USA universities in the top 50 sample along with an additional 13 from the United Kingdom, eight from Australia, four are Canadian and three others (two from Singapore and one from New Zealand).

Table 1 reveals the key economic characteristics of these renown 50 universities. Total asset size varied greatly with USA universities averaging a massive 10 billion dollars with all other country averages only 1/6 that size. Overall most universities recorded low profit levels (0-3%) and moderate borrowings (31%). T-test analysis shows that USA universities' characteristics differed from their global counterparts in terms of the significantly lower (t- tests, p-value .001) and most varied profit figures are noted with the USA universities.

In regards to Knowledge Management (KM) issues as measured in the far right column, Table 1 shows that the University of Sydney has the highest overall reporting of 46.2% whilst the California Institute of Technology had a far lower 6.4% figure. The overall transparency level for these world's most prestigious universities was only 26.5%. Further analysis compares the 22 USA universities (a lower 22.5% average) to the other top 28 global tertiary institutions (a statistically noticeable higher value of 29.6%).

Table 2 then presents the level of Knowledge Management items by the six major KM/IC categories: employee data, customer information, information technology, process, research and development, and strategy (Bukh et al, 2005). Tower et al (2008) argue that these are the key categories to assess the contributions made by universities in science, humanities, and technology academic disciplines.

Table 2 provides a wealth of detailed data on the six key categories for Knowledge Management. The reporting ranges narrowly from 21% average reporting for Research and Development issues to 30% for Strategic matters. Interestingly the non-USA universities had higher overall levels on all categories except for Information Technology' with four of the categories statistically significantly higher ('Employees', 'Customers', 'Research and Development' and 'Strategic'. This lower level of communication in America may be due to greater litigation fears in the USA over the possible negative consequences of providing extra information. Further ANOVA and Post Hoc Tukey analysis detected the key significant differences between the countries were: 1) between Australia and the USA (for the overall Knowledge Management (KMDV) score as well as 'Employees' and 'Research and Development'); 2) between all other countries and the USA for 'Processes'; and 3) between Australia and Canada for 'Customers' items.

Although not shown as it merely provides confirmatory data, multiple regression analysis also reveals that country is the main predictor of Knowledge Management and its key components. Global universities communicate more information virtually across the board than do USA universities. The main demographic characteristics shown in Table 1 are not explanatory factors for differences in KM communication patterns.

Table 2: Six Knowledge Management Categories: Detailed Analysis

University name	*Rank*	*Employees*	*Customers*	*IT*	*Processes*	*R and D*	*Strategic*	*KMDV*
Harvard University	1	22.2	50.0	20	12.5	22.2	47.1	32.1%
Yale University	4	25.9	35.7	80	25	0	41.2	32.1%
Princeton University	6	14.8	28.6	0	0	11.1	5.9	12.8%
California Institute of Technology	7	3.7	0	0	0	11.1	17.6	6.4%
University of Chicago	8	22.2	28.6	0	25	33.3	29.4	25.6%
Massachusetts Institute of Technology	9	11.1	14.3	40	0	0	11.8	11.5%
Duke University	10	22.2	35.7	0	25	11.1	23.5	23.1%
University of Pennsylvania	11	22.2	35.7	40	0	0	17.6	20.5%
Stanford University	13	18.5	35.7	0	12.5	11.1	41.2	24.4%
Carnegie Mellon University	14	14.8	28.6	60	0	11.1	23.5	20.5%
Cornell University	15	44.4	35.7	20	50	33.3	52.9	43.6%
Northwestern University	19	14.8	28.6	0	0	0	5.9	11.5%
University of Michigan	26	14.8	35.7	20	62.5	33.3	41.2	32.1%
University of California, Los Angeles	27	18.5	35.7	0	0	0	17.6	16.7%
University of Washington	32	14.8	35.7	60	25	11.1	17.6	23.1%
University of California, San Diego	33	14.8	35.7	60	50	33.3	35.3	32.1%
University of Illinois	40	22.2	35.7	20	25	44.4	41.2	32.1%
University of Pittsburg	42	22.2	28.6	60	25	11.1	0	20.6%
University of Maryland	43	14.8	21.4	0	0	11.1	5.9	11.5%
Case Western Reserve University	46	7.4	21.4	40	0	0	29.4	15.4%
University of Rochester	48	29.6	21.4	0	0	22.2	23.5	21.8%
Georgia Institute of Technology	50	11.1	28.6	0	12.5	44.4	52.9	26.9%
University of Cambridge	2	14.8	14.3	80	37.5	0	11.8	19.2%
University of Oxford	3	33.3	21.4	20	12.5	0	5.9	19.2%
Imperial College London	5	18.5	28.6	20	37.5	11.1	35.3	25.6%
University of Edinburgh	16	11.1	21.4	80	37.5	33.3	41.2	29.5%
King's College London	17	22.2	35.7	80	25	22.2	29.4	30.8%
University of Manchester	20	18.5	28.6	20	12.5	11.1	52.9	26.9%
University of Bristol	25	29.6	28.6	20	25	22.2	23.5	26.9%
London School of Economics	34	22.2	42.9	40	25	0	41.2	29.5%
University of Sheffield	37	25.9	35.7	80	62.5	33.3	23.5	35.9%
University of Nottingham	39	18.5	28.6	40	0	33.3	17.6	21.8%
University of St Andrews	41	22.2	21.4	0	0	0	5.9	12.8%
University of Leeds	44	40.7	42.9	20	50	44.4	41.2	42.3%
University of Glasgow	45	18.5	21.4	0	25	22.2	23.5	20.5%
Australian National University	12	3.7	7.1	0	37.5	22.2	29.4	15.4%
University of Melbourne	18	18.5	14.2	0	37.5	33.3	23.5	21.8%
University of Sydney	21	59.2	21.4	20	62.5	33.3	47.1	46.1%
University of Queensland	23	40.7	28.6	80	50	44.4	41.2	43.6%
Monash University	28	37.0	21.4	40	62.5	55.56	29.4	38.5%
University of New South Wales	29	40.7	21.4	20	62.5	22.2	47.1	38.5%
University of Adelaide	35	40.7	21.4	0	50	33.3	29.4	33.3%
University of Western Australia	36	44.4	21.4	40	50	33.3	35.3	38.5%
University of British Columbia	22	22.2	35.7	0	12.5	11.1	41.2	25.6%
University of Toronto	30	14.8	35.7	20	0	0	23.5	18.0%
Queen's University	47	37.0	42.9	60	50	44.4	41.2	43.6%
University of Alberta	49	22.2	50	80	12.5	22.2	23.5	30.8%
National University of Singapore	24	18.5	35.7	0	0	44.4	29.4	24.4%
Nanyang Technological University	38	29.6	28.6	20	0	33.3	29.4	26.9%
University of Auckland	31	33.3	42.9	80	50	33.3	47.1	43.6%
Overall Means		**23.3**	**29.1**	**29.6**	**24.8**	**21.1**	**29.1**	**26.5%**
Country Analysis:		*Employees*	*Customers*	*IT*	*Processes*	*R and D*	*Strategic*	*KMDV*
US (22)		18.52%	29.87%	23.64%	15.91%	16.16%	26.47%	22.55%
All Others (28)		27.11%	28.57%	34.29%	31.70%	25.00%	31.10%	29.62%
T-Test (p-value)		*.005**	*.655*	*.196*	*.009**	*.049***	*.268.*	*010***
US (22)		22.55%	18.52%	29.87%	23.64%	15.91%	16.16%	26.47%
UK (13)		26.23%	22.79%	28.57%	38.46%	26.92%	17.95%	27.15%
Australia (8)		34.46%	35.65%	19.64%	25%	51.56%	34.72%	35.29%
Canada (4)		29.49%	24.07%	41.07%	40%	18.75%	19.44%	32.35%
Other (3)		31.62%	27.16%	35.71%	33.33%	16.67%	37.04%	35.29%
ANOVA (p-value)		*.005**	*.004**	*.596*	*.001**	*.015***	*.511*	*.035***

Legend: *Highly Significant at p-value <.01; **Significant at p-value <.05; ***Moderately Significant at p-value < .10.

CONCLUDING REMARKS

This project examines the 50 best English language universities in the world to evaluate their level of Knowledge Management communication. Arguably, KM is the *raison d'etre* for such institutions with their historical crucial knowledge contributions to their respective societies.

The research findings are surprising in two major aspects. The first key conclusion is the overall level low of KM transparency for all these global-elite universities. There is a paucity of knowledge management information communicated across the board. No key KM topic had over a 40% disclosure level. This raises serious concerns regarding the willingness of these top-ranked universities to communicate their contribution. Arguably, such incomplete information raises serious questions as to the related optimal funding level of these institutions by governments and constituents. Second, the statistical findings highlight the problem that USA universities are far less willing to voluntarily communicate their Knowledge Management contributions to society. Given their massive size and resource base, this dearth of information is disappointing. The implications of these findings are that much more effort is needed for improved transparency across the entire range of Knowledge Management issues. These worlds' best universities need to more clearly communicate their intellectual contribution in creating a global knowledgeable society.

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AUTHOR INFORMATION

Dr Greg Tower is a professor in the School of Accounting at Curtin University of Technology in Perth Australia. Greg has over 70 refereed journal articles on a wide variety of business communication, organizational performance and comparative international accounting topics. He is especially interested in research that examines innovative ways of improving better understanding of business activities and practices. Greg has successfully supervised over 30 postgraduate research students and has an extensive track record of successful external research grants. He was awarded the 'Researcher of the Year' award in 2007 by the Curtin Business School.

Dr Julie Plummer is an Associate Professor at the University of Western Australia in agricultural science. She has 22 years experience in teaching and research. She has published 127 articles including 69 peer-reviewed papers, 22 in the last 5 years. She has had over $4 million in research funding, including $1.3 million from Australian government agencies through national competitive grants. Julie has successfully supervised over 50 research students. Her excellence in teaching was recognized with the Australian Society for Plant Physiologists National Teaching Award in 2000 and nomination for a UWA Student Guild Postgraduate Supervision Award in 2006.

Emily Goforth conducts research activities in the Curtin Business School, Curtin University of Technology. Her wide-ranging research interests include psychology, decision-making in both personal and business settings, human behavioral patterns, fitness wellbeing and changing societal attitudes.

Brenda Ridgewell lectures at the School of Art at Curtin University of Technology. She explores the creative aspects of art, especially in innovative jewellery design which emphases light, space and form. Her jewellery has been exhibited both nationally and internationally, and acquired by many collectors both public and private including the National Gallery of Australia.

Spence Tower has his Ph.D. from Michigan State University in Organizational Behavior with an emphasis in Human Resource Management. For the previous ten years he had been teaching graduate and undergraduate organizational behavior, strategic management, human resources, and numerous other management classes. He is currently an assistant professor at Ferris State University in Michigan and has also taught in California, Illinois and the University of Pittsburgh's Semester at Sea Program. He has consulted with organizations such as Health Canada, Independent Bank, Aetna, Tenneco, The National Charter School Institute, and the Girl Scouts of America.

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